

REMARKS

Claims 1, 3, 4, 9-12, 14-20, 24 and 25 are pending. Claims 2, 5-8, 13 and 21-23 have been canceled without prejudice. Claims 14-19 have been indicated as being allowed. Claim 25 has been amended to clarify that the ratio is by weight. Support for this Amendment can be found in the paragraph bridging pages 20-21 of the present specification. No new matter has been added by way of the above-amendment.

Issues Under 35 U.S.C. § 112

Claim 25 is rejected under 35 U.S.C. § 112, second paragraph for being indefinite. Applicants respectfully traverse the rejection.

Specifically, the Examiner objects to the limitation of "a ratio of 1:8 and 1:40". The Examiner finds that this ratio is indefinite since the ratio does not recite whether it is based upon weight or mole. In response, Applicants have amended claim 25 to clarify that the ratio is by weight. Support for this Amendment can be found in the paragraph bridging pages 20-21 of the present specification.

In view of the fact that the claims, as currently amended, particularly point out and distinctly claim the subject matter of the invention, the claims meet the requirements of 35 USC 112, second paragraph.

As such, withdrawal of the rejection is respectfully requested.

Sections 4 – 6, 8 and 9 of the outstanding Office Action.

The Examiner has maintained the following prior art based rejections:

- Claims 1, 3-4, 9, 12, 20, and 24-25 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Jamil (U.S. Patent No. 5,772,916) in view of Arakawa et al. (U.S. Patent No. 6,031,236);

- Claim 10 is rejected under 35 U.S.C. § (a) as being unpatentable over Jamil and Arakawa et al. as applied to claim 1 above, in view of Leblans et al. (U.S. Patent No. 5,360,578); and
- Claim 11 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Jamil and Arakawa et al. as applied to claim 9 above, in view of Hultsch et al. (U.S. Patent No. 4,405,454).

Applicants respectfully traverse all of the rejections.

In the Amendment filed January 4, 2007, Applicants responded at length to these rejections. However, in response to Applicants' amendments/comments, the Examiner issued the outstanding Office Action. It is Applicants' understanding from the Examiner's comments in the outstanding Office Action that the Examiner's position is as follows:

(i) The dispersing solvent for the first slurry mentioned in Jamil is not limited to isopropyl alcohol used in the working examples of Jamil, therefore, Applicant's assertion that Jamil uses isopropyl alcohol as the dispersing solvent for the first slurry is not in commensurate with the scope of the disclosure of Jamil.

(ii) The dispersing solvent for the first slurry can be selected from various solvents, and the second slurry can use the same solvent as the first slurry. MEK is exemplified as a suitable solvent for making the second slurry in Jamil, although Jamil teaches that isopropyl alcohol is the most preferred as the dispersing solvent for the first slurry.

(iii) Consequently, Jamil teaches that the dispersing solvent for the first slurry and the solvent for forming the binder solution both can both be MEK. Therefore, a person skilled in the art would have considered that the drying step was unnecessary and would have omitted the drying step.

Applicants now respond to items (i)-(iii).

Applicants respectfully submit that the Examiner's position is improper at least with respect to items (ii) and (iii).

Regarding item (ii), if the Examiner thinks that the combination of Jamil and the other references suggests the presently claimed invention merely because MEK is included in a number of usable solvents mentioned in Jamil, the Examiner is not accounting for the fact that the inventive method has advantages which would not be expected based on the teachings of Jamil. As such, Applicants firmly believe that the rejection is unreasonable. On this matter, the Examiner's attention is directed to the Declarations filed on June 25, 2004 and April 12, 2005 which are evidence of the advantageous effects achieved by the use of MEK as the dispersing solvent for the first slurry.

The Examiner assumes that the use of MEK is obvious to a person skilled in the art in consideration of (a) Jamil describes MEK as a preferred solvent for preparing the second slurry, (b) Jamil describes that the solvent for the second slurry can be selected from those listed as the dispersing solvent for the first slurry, and (c) MEK is cited as an example of the dispersing solvent for the first slurry. However, this position is unreasonable. This is because, even if the solvent for the second slurry can be selected from those listed as the dispersing solvent for the first slurry, this does not mean that the dispersing solvent for the first slurry can be selected from those listed as the solvent for the second slurry.

If Jamil provided a suggestion that the physical characteristics required for both solvents were perfectly the same, then the Examiner's position would be less unreasonable. However, in fact, there is no such suggestion. Jamil recites: "The solvent may be any nonreactive organic solvent" (column 11, lines 22 to 23; this solvent means the dispersing solvent for the first slurry). On the other hand, with respect to the solvent for the second slurry, Jamil recites: "The solvent may be any nonreactive, compatible, organic solvent," (column 12, lines 29 to 30). Accordingly, Jamil differentiates the dispersing slurry for the first slurry from the solvent for the second slurry, and teaches that the solvent for the second slurry needs to additionally have compatibility ("compatibility" is considered to mean ability to dissolve the binder from the context).

A person skilled in the art, reading Jamil, would naturally understand that the compatibility is not an essential feature for the dispersing solvent for the first slurry. Therefore, it would be very difficult for him to find that MEK is particularly preferred as the dispersing

solvent for the first slurry. Accordingly, he would at best conduct additional experiments using isopropyl alcohol, or conduct experiments using each of the many other solvents without particular preference in view of the technical objective (improvement of dispersibility of dry powder) mentioned in Jamil.

Regarding item (iii), the above arguments with respect to item (ii) are equally applicable to item (iii) in view of the fact that item (iii) requires item (ii) as a presupposition. Nevertheless, Applicants discuss item (iii) (i.e., the obviousness in omitting the drying step) in detail now.

It is appropriate for the Examiner to look to the needs addressed by Jamil in understanding the scope of the invention of Jamil. In the case of processes for producing radiation image conversion panels, it was a common practice, at the time the present invention was made, to once convert stimulable phosphor powder to dry powder, which is easy to transport, and, when making radiation image conversion panels, prepare slurry from the dry powder and apply the slurry. For example, Jamil, in its summary section, recites "The present invention includes a method for preparing a phosphor powder..." (see column 6, lines 25 to 26) and "The invention also includes, in another embodiment, a method of producing a phosphor screen. The method comprises preparing a phosphor powder..." (see column 6, lines 44 to 46). From these recitations, it is clear that the formation of phosphor powder is an essential step in the processes described in Jamil. In accordance with the common practice, Jamil focuses on improving the quality of phosphor powder (column 5, line 58 to column 6, line 24). Japanese Patent Application Laid-Open No. 11-106748, which is mentioned in the background section of the present specification, also focuses on the improvement of the quality of phosphor powder.

The inventor of the present invention conducted extensive research in order to achieve further improvement of image quality, and found that aggregation of particles occurs during the drying step for making powder, thereby impairing the quality of radiation image conversion panels (see p. 4, last paragraph of the specification).

Thus, it is reasonable to believe that a person skilled in the art, without knowing the disclosure of the present application, would not have found it obvious to omit the drying step no

matter what kind of solvent was used. Therefore, the Applicant believes that the Examiner neglects the aforementioned points and relies on impermissible hindsight.

In summary, the Applicant believes that Jamil gives no suggestion as to the technical problems that were first found and solved in the present application. Unobviousness can reside in the discovery of the cause of a problem, the solution of which employs a combination of old elements. *In re Sponnoble* (CCPA 1969) 405 F2d 578, 160 USPQ 237. The unobviousness involved in the discovery of the reason for the problem can impart patentability to the solution thereto, even though by hindsight the cause of the problem, once recognized, may suggest the solution. *In re Linnert et al.* (CCPA 1962) 309 F2d 498, 135 USPQ 307; *Trio Process Corp. v. L. Goldstein's Son's Inc.* (CA 3 1972) 461 F2d 66, 174 USPQ 129; *In re Roberts et al.* (CCPA 1973) 470 F2d 1399, 176 USPQ 313; *In re Peehs et al.* (CCPA 1980) 612 F2d 1287, 204 USPQ 835; *In re Nomiya et al.* (CCPA 1975) 509 F2d 566, 184 USPQ 607; *Ex parte Campbell et al.* (POBA 1980) 211 USPQ 575. A reference which performs a step of a claimed process for a different purpose and does not recognize the problem solved in applicant's process does not render the process obvious. *Ex parte Wisdom et al.* (POBA 1973) 184 USPQ 822.

The Examiner relies on the secondary references of Arakawa et al., Leblans et al. and Hultsch et al. for curing the deficiencies of Jamil et al. In view of the fact that none of these secondary references teach or fairly suggest modifying Jamil et al. to not have a drying step between steps (b) and (c), these secondary references do not cure the deficiencies of Jamil et al.

Based on the foregoing, withdrawal of the rejections is respectfully requested.

In view of the above amendment, applicant believes the pending application is in condition for allowance.

Conclusion

In view of the above remarks, it is believed that claims are allowable.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Garth M. Dahlen, Ph.D., Esq., Reg. No. 43,575 at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.14; particularly, extension of time fees.

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Respectfully submitted,

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